



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,662	12/18/2001	Raymond L. Chong	21-003	5065
22898	7590	08/19/2005	EXAMINER	
THE LAW OFFICES OF MIKIO ISHIMARU 1110 SUNNYVALE-SARATOGA ROAD SUITE A1 SUNNYVALE, CA 94087			JAIN, RAJ K	
			ART UNIT	PAPER NUMBER
			2664	

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/029,662

Applicant(s)

CHONG, RAYMOND L.

Examiner

Raj Jain

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18, 20, 21, 23-32, 34-36, 38-48, 50-58 and 60 is/are rejected.
- 7) ☒ Claim(s) 19, 22, 33, 37, 49 and 59 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 02/19/02
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

Claims 1-60 examined on the merits.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-18, 20,21, 39-48, 50-58, 60 are rejected under 35 U.S.C. 102(e) as being anticipated by Zitting et al (US006584148B1).

Regarding claims 1,9, 10, 20, 24, 39 and 52, Zitting discloses a Remote Test Unit (RTU) (see Fig. 1, remote test interface 36 at customer premises 30), comprising:

-a logic circuitry adapted to emulate a central Digital Subscriber Line Modem (DSLAM-C) for testing customer premises equipment containing a remote Digital Subscriber Line Modem (DSLAM-R) (see Fig. 1, col 1 lines 60-67, col 3 lines 1-20, the co-location cage 29 contains the logic circuitry with DSLAM 28 that contains one or more DSL modems to format the incoming DSL signals for transmission, the DSL signals are then passed to the remote test interface 36 at customer premises which is passed to the customer DSL modem 39);

Art Unit: 2664

-and a DSLM-R for testing central offices equipment including a Digital Subscriber Line Access Multiplexer (DSLAM) containing a DSLM-C (See Fig. 1, col 2 lines 5-20, the local management device 26 manages the DSL signals within the central office equipment);

-a Digital Subscriber Line Modem Central/Remote (DSLM-C/R) test head connected to the logic circuitry for connecting the logic circuitry to the DSLM-R and for completing the logic circuitry to the DSLM-C (see Fig. 1, a NID device is connected to the customer premises for providing the interface to the logic circuitry carrying voice and data signals between the NID and the RTI, the NID can also act as a test head that interfaces with the RTI. In the field of telecommunications testing, it has heretofore been known to provide an expensive and complicated test head for physically coupling with the line under test. The technician physically connects the known test head to the telecommunications line. These known test heads include various electronic circuits for coupling with the line under test, as well as a computer hard-wired thereto. The computer allows the technician to perform various tests on the line).;

- a copper loop testing (CLT) test head connected to the logic circuitry for connecting the logic circuitry to the customer premises equipment; and wherein: the logic circuitry is further adapted to perform copper loop testing on a first connection between the logic circuitry and the customer premises equipment (see Figs. 1 & 2. col 3 lines 19-22, col 5 lines 45-55, col 6 lines 35-40, copper loop wiring 25, 27 may be connected to a test head as appropriate for testing of the copper lines between the

Art Unit: 2664

central office and customer premises, furthermore, a first line 25 may be tested that is coupled to say pin #1 and pin #2 to the customer premises interface 142 of Fig. 2);

-a plurality of test ports; and an internal matrix connected to the plurality of test ports for selectively connecting the DSLM-C/R test head and the CLT test head to the plurality of test ports (see Fig. 2, the loop management device shows a plurality of test ports 142, 144 and an internal matrix 112, 146 that are connected to the test ports that further connect to a DSLx and test head as appropriate for testing of the lines and modems).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23-28, 31, 32, 34-36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zitting et al (US006584148B1) in view of Jollota (US006295339B1).

Regarding claims 23, 34, 35, 38, 40, 50, 51, and 60, Zitting discloses a Remote Test Unit (RTU) (see Fig. 1, remote test interface 36 at customer premises 30), comprising:

-a logic circuitry adapted to emulate a central Digital Subscriber Line Modem (DSL-M-C) for testing customer premises equipment containing a remote Digital Subscriber Line Modem (DSL-M-R) (see Fig. 1, col 1 lines 60-67, col 3 lines 1-20, the

Art Unit: 2664

co-location cage 29 contains the logic circuitry with DSLAM 28 that contains one or more DSL modems to format the incoming DSL signals for transmission, the DSL signals are then passed to the remote test interface 36 at customer premises which is passed to the customer DSL modem 39);

-and a DSLM-R for testing central offices equipment including a Digital Subscriber Line Access Multiplexer (DSLAM) containing a DSLM-C (See Fig. 1, col 2 lines 5-20, the local management device 26 manages the DSL signals within the central office equipment);

-a Digital Subscriber Line Modem Central/Remote (DSLM-C/R) test head connected to the logic circuitry for connecting the logic circuitry to the DSLM-R and for completing the logic circuitry to the DSLM-C (see Fig. 1, a NID device is connected to the customer premises for providing the interface to the logic circuitry carrying voice and data signals between the NID and the RTI, the NID can also act as a test head that interfaces with the RTI. In the field of telecommunications testing, it has heretofore been known to provide an expensive and complicated test head for physically coupling with the line under test. The technician physically connects the known test head to the telecommunications line. These known test heads include various electronic circuits for coupling with the line under test, as well as a computer hard-wired thereto. The computer allows the technician to perform various tests on the line).;

- a copper loop testing (CLT) test head connected to the logic circuitry for connecting the logic circuitry to the customer premises equipment; and wherein: the logic circuitry is further adapted to perform copper loop testing on a first connection

Art Unit: 2664

between the logic circuitry and the customer premises equipment (see Figs. 1 & 2. col 3 lines 19-22, col 5 lines 45-55, col 6 lines 35-40, copper loop wiring 25, 27 may be connected to a test head as appropriate for testing of the copper lines between the central office and customer premises, furthermore, a first line 25 may be tested that is coupled to say pin #1 and pin #2 to the customer premises interface 142 of Fig. 2);

-a plurality of test ports; and an internal matrix connected to the plurality of test ports for selectively connecting the DSLM-C/R test head and the CLT test head to the plurality of test ports (see Fig. 2, the loop management device shows a plurality of test ports 142, 144 and an internal matrix 112, 146 that are connected to the test ports that further connect to a DSLx and test head as appropriate for testing of the lines and modems).

Zitting fails to disclose an access matrix adapted to selectively connect the DSL lines between central office and customer premises.

Jollota discloses an access matrix adapted to selectively connect the DSL lines between central office and customer premises (see col 1 lines 52-67).

The use of adaptive access matrix provides a redundancy service to overcome "fault" lines within the central office and customer premises.

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made incorporate an access matrix to selectively connect dsl lines so as to avoid the problem of line loss and maintain continuous communications.

Art Unit: 2664

Regarding claim 2, Zitting discloses logic circuitry for testing central office equipment (See Fig. 1, col 2 lines 5-20, the local management device 26 manages the DSL signals within the central office equipment);

Regarding claims 3, 11, 25, 41 Zitting discloses a copper loop testing (CLT) test head connected to the logic circuitry for connecting the logic circuitry to the customer premises equipment; and wherein: the logic circuitry is further adapted to perform copper loop testing on a first connection between the logic circuitry and the customer premises equipment (see Figs. 1 & 2, col 3 lines 19-22, col 5 lines 45-55, col 6 lines 35-40, copper loop wiring 25, 27 may be connected to a test head as appropriate for testing of the copper lines between the central office and customer premises, furthermore, a first line 25 may be tested that is coupled to say pin #1 and pin #2 to the customer premises interface 142 of Fig. 2)

Regarding claims 4, 12, 26, 42, 53, Zitting discloses a plurality of test ports; and an internal matrix connected to the plurality of test ports for selectively connecting the DSLM-C/R test head and the CLT test head to the plurality of test ports (see Fig. 2, the loop management device shows a plurality of test ports 142, 144 and an internal matrix 112, 146 that are connected to the test ports that further connect to a DSLx and test head as appropriate for testing of the lines and modems).

Regarding claims 5, 13, 27, 43 Zitting discloses test ports connected to a multiplexer (see Figs. 1 & 2, LMD 26 connecting ports 142 144 to the DSLAM 28).

Regarding claims 6, 14, 28, 44, 54, Zitting discloses short loop testing (see Fig. 8).



Art Unit: 2664

Regarding claims 17, 18, 31, 32, 47, 48, 57 and 58 Zitting discloses general DSL service connection and testing of the circuit lines between central office and customer end points (see Fig. 1), one skilled in the art will appreciate, an ISP is easily incorporated for broadband data transmissions that uses dial-up, dsl and other communications means to transfer desired data and also voice).

Claims 7, 8, 15, 16, 21, 45, 46, 51 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zitting et al (US006584148B1) in view of Adams Jr. et al. (US005444782A).

Zitting discloses a system and method for testing digital subscriber lines between central offices and plurality of customer premises (see Fig. 1).

Zitting fails disclose a concentrator with a multiplexer and router thereto.

Adams discloses a concentrator with a multiplexer and router (see col 11 lines 19-35, a computer network encryptor decryptor device incorporates (CNEDD) plurality of devices including a concentrator, router, multiplexer etc.). The use of combined circuitry for a concentrator, router, etc. allows for secure transmission of files from remote locations to a modem.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made incorporate a CNEDD within Zitting so as to provide for secure transmission of files from remote locations to a modem.

Art Unit: 2664

Claims 29, 30, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zitting et al (US006584148B1) in view of Jollota (US006295339B1) and further in view of Adams Jr. et al. (US005444782A).

Zitting discloses a system and method for testing digital subscriber lines between central offices and plurality of customer premises (see Fig. 1).

Jollota discloses an access matrix adapted to selectively connect the DSL lines between central office and customer premises (see col 1 lines 52-67).

Zitting and Jollota fail disclose a concentrator with a multiplexer and router thereto.

Adams discloses a concentrator with a multiplexer and router (see col 11 lines 19-35, a computer network encryptor decryptor device incorporates (CNEDD) plurality of devices including a concentrator, router, multiplexer etc.). The use of combined circuitry for a concentrator, router, etc. allows for secure transmission of files from remote locations to a modem.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made incorporate a CNEDD within Zitting and Jollota so as to provide for secure transmission of files from remote locations to a modem.

#### ***Allowable Subject Matter***

Claims 19, 22, 33, 37, 49 and 59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2664

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj Jain whose telephone number is 571-272-3145.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.



RJ

August 8, 2005